RIV938S

SMALL, LIGHTWEIGHT PULL-TO-PRESSURE TOOL FOR RIVET NUTS FROM #4-40 TO 1/4” AND M3 TO M6

OPERATING INSTRUCTIONS

PennEngineering®

PEM® ATLAS®

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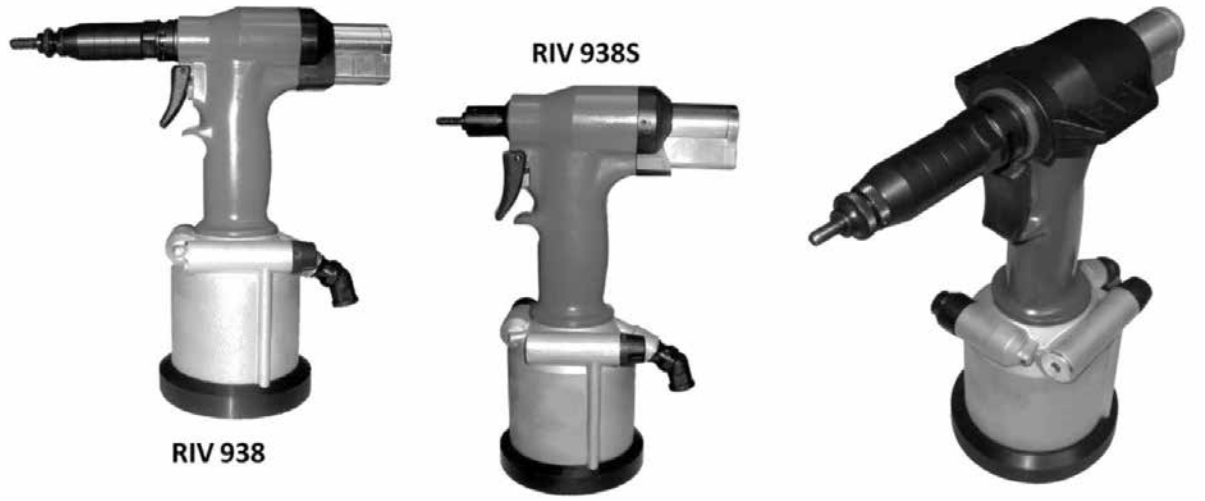
NOTE: THE RIV938S TOOL COMES WITHOUT NOSE ASSEMBLY KITS.
NOSE ASSEMBLY KITS HAVE TO BE ORDERED SEPARATELY ACCORDING TO THE USER NEEDS.

1. Air piston return (without spring).
2. Power piston air outwardly, not through the piston.
3. Tie rods are now replaced by commercial screws.
4. Additional unscrewing in case the user installs the wrong insert, or in case it gets stuck due to an improper regulation.
5. One position trigger mechanism.
6. No adjustments are needed when there is a thickness change in materials.
7. No damages occurs to mandrel (or tie rod) if operations are repeated.
8. Lightweight.
9. Small dimensions.

RIV 938 AND RIV938S

PROTECTIVE WING
(optional accessory)



Protective wing

Remove standard protection

Install the protective wing into the standard protection housing

Together with the rubber base, it creates a support for the tool, avoiding any contact of the surface with the metal part of the tool body.

GENERAL INFORMATION

MANUFACTURER
Rivit S.r.l. was born in 1973, it produces and distributes in Fasteners and Tools for Fixings (tools for rivets and rivet nuts). The Company boasts much technical experience and offers a wide range of products related to fastening systems.

ASSISTANCE
In case you need any assistance concerning the use and the maintenance of the tool, or in case you need to order any spare parts, you shall contact your local authorised dealer (or Rivit S.r.l. directly) specifying the identification/ serial numbers of the tool, written on its outer casing.

CERTIFICATION AND EC MARKING
The tool is manufactured in compliance with the European Directives, which are in force when the tool itself is put on the market. As the tool is not included in ENCLOSURE IV of DIRECTIVE 2006/42/EC, Rivit S.r.l. issues a self-certification to apply the EC marking.

WARRANTY
The warranty has a validity of 12 months, as of the date indicated on the invoice.
The warranty only covers replaced parts; labour is not included.
The following are not covered by warranty: standard accessories (see section 2.5) and tool damages caused by:
- transport and/or handling, user's mistakes,
- failed servicing/maintenance, as indicated in section 7 of this manual,
- faults and/or breakages that are not attributable to tool anomalies,
- normal consumption of consumables.

The warranty is invalidated both in case of unauthorized tampering/replacements of tool components and in case of use of accessories, tools or consumables different to those recommended by the manufacturer, which could even cause injuries to the tool's user.
Rivit S.r.l. assumes responsibilities only if the tool is originally defective, but declines all forms of responsibility if the user fails to follow the instructions given.

OPERATING SYSTEM
The hydro-pneumatic RIV938S tool, with oil pressure regulation, is designed to place female threaded inserts (from #4-40 to 1/4" / M3 to M6) The hydro-pneumatic system and the mechanical components used inside the RIV938S, when compared with other riveting tools, are more reliable. There is less wear and tear of the components, consequently the tool will last much longer and work better. The technical solutions adopted make the RIV938S more compact and lighter.

MANUAL STRUCTURE
This instruction manual must be read with particular attention by the Customer, as the correct pre-arrangement, installation and use of the tool, are the correct basis for a good relationship between Manufacturer and Customer.

PURPOSE AND CONTENTS
The manual herein has the purpose of providing the Customer with all the information needed not only to use the tool correctly, but also to manage it self-sufficiently and safely. It includes information concerning technical aspects, operation, maintenance, spare parts and safety.
Users and Qualified Technicians must read the instructions given herein thoroughly before starting to use the tool. If you have any doubts on the meaning of the instructions given, please do not hesitate to contact Rivit S.r.l. for further explanations.

RECEIVERS

The manual herein has been written for both the operators and the technicians enabled to service the tool.
Operators must not carry out jobs reserved to service and/or qualified technicians.
Rivit S.r.l. is not liable for any damage deriving from the failed observance of this rule.

PLACING OF THE MANUAL

This instruction manual must be kept near the tool, inside a dedicated container and, above all, away from liquids or anything else that may compromise its legibility.

VIBRATION

When used correctly, the tool does not produce any dangerous vibration.

NOISE LEVEL

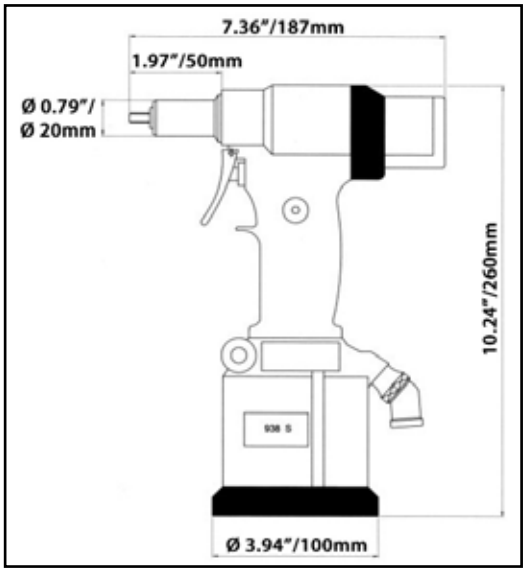
The tool is designed and manufactured in such a way that the noise level is very low. The weighed equivalent continuous acoustic pressure level A in the operator position is indeed below 80 dB (A).
This information can allow the tool user to better evaluate the possible risks of danger.

TECHNICAL DATA

The following table provides the technical data and features of the tool, to which you must refer when contacting the ATLAS® Technical Assistance Department at PennEngineering.

TECHNICAL DATA AND FEATURES

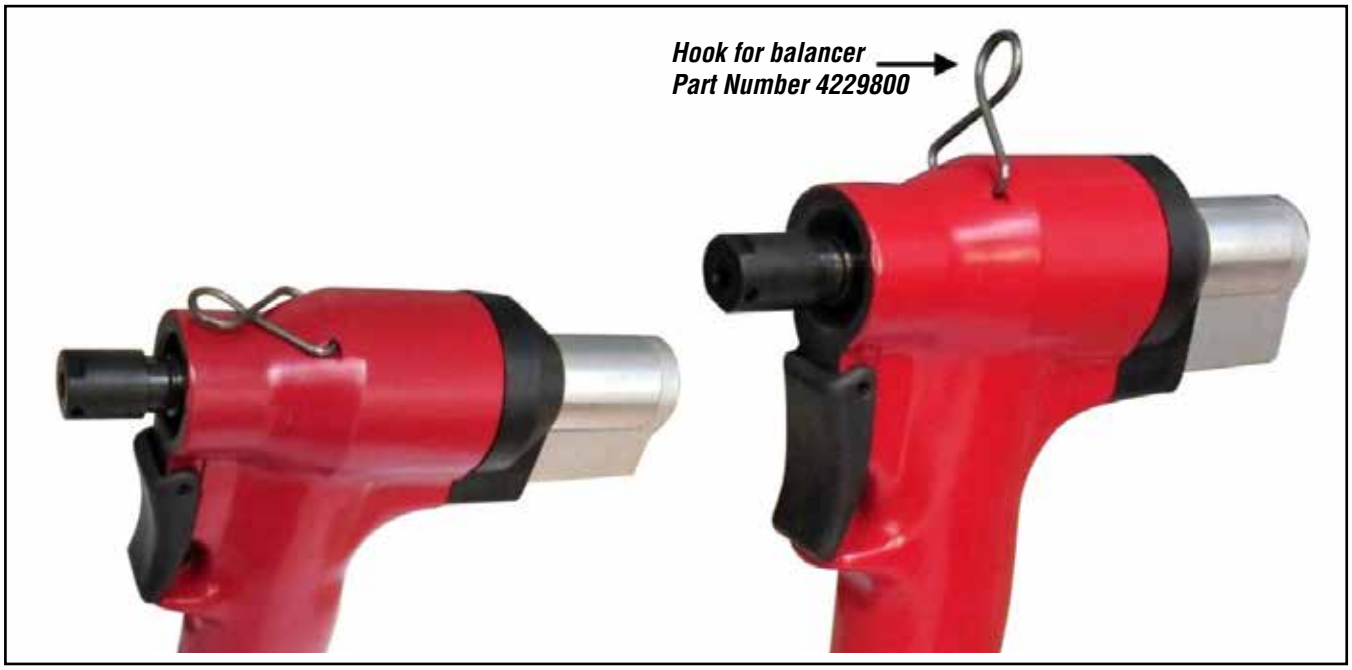
AIR WORKING PRESSURE	90 PSI / 6 BAR
MAX AIR PRESSURE	70 to 100 PSI / 5 to 7 BAR
AIR CONSUMPTION PER CYCLE	305.1 cu. in. @ 90 PSI 5 liters @ 6 BAR
MAX STROKE	.256" / 6.5 mm
MAX AXIAL PULLING LOAD	3147 lbs. @ 90 PSI 14 kN @ 6 BAR
MOTOR SPEED (SPIN ON)	1600 rpm
MOTOR SPEED (SPIN OFF)	2000 rpm
WEIGHT	3.7 lbs. / 1.7 kg
VIBRATIONS	< 2.5 m/s2
NOISE LEVEL	76 dB (A)



NOSE ASSEMBLIES AND STANDARD ACCESSORIES

The nose assemblies stated hereafter refers to standard tools.
Any special tool could consequently require special parts, different than those listed.

REF.	PART NUMBER	QTY	DESCRIPTION
1	4143500	1	RIV938S-HYDRO-PNEUMATIC TOOL FOR INSERTS (IN CASE)
2	3064400	1	HYDRAULIC OIL TYPE ISO VG 32 100CC
3	0369800	1	PLASTIC CASE
4	4170700	1	EMERGENCY AND STROKE REGULATION PIN
5	4154200	1	REGULATION WRENCH MM. 3,0
6	4006300	1	WRENCH 12MM
7	4006400	1	WRENCH 14MM
8	4006500	1	WRENCH 18MM
–	–	1	INSTRUCTION MANUAL



OPTIONAL TOOLING

For Blind Threaded Insert Installation.

NOSE ASSEMBLY PART NUMBERS

Thread Size	Part No. For Complete Insert Nose Assembly	Part No. For Replacement SHCS / Mandrel[1]
#4-40	4362400	MC-91251A115 (50/box)
#6-32	4362500	IN-18856 (100/box)
#8-32	4362600	IN-03156 (100/box)
#10-24	—	IN-12557 (100/box)
#10-32	4362700	IN-17814 (100/box)
1/4-20	4362800	IN-05272 (100/box)
1/4-28	—	IN-11519 (100/box)
M3	3758400	IN-03010 (200/box)
M4	3758500	IN-25381 (200/box)
M5	3758600	IN-21096 (200/box)
M6	3758700	IN-22121 (200/box)

(1) Replacement mandrels sold in box quantities shown above.

KIT FOR BLIND THREADED INSERT #4-40

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	4362400	1	KIT 938S #4-40

KIT COMPOSITION

2 *3* *4* *5*

REF.	PART NUMBER	QTY	DESCRIPTION
2	3751100	1	HEAD FOR #4-40 SCREW
3	3756500	1	ADAPTER FOR #4-40 SCREW
4	MC-91251A115 (50/box)	1	SOCKET CAP SCREW 12.9 #4-40 X 1”
5	4377100	1	HEXAGONAL JOINT FOR #4-40 SCREW

KIT FOR BLIND THREADED INSERT #6-32

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	4362500	1	KIT 938S #6-32

KIT COMPOSITION

REF.	PART NUMBER	QTY	DESCRIPTION
2	4377700	1	HEAD FOR #6-32 SCREW
3	4377800	1	ADAPTER FOR #6-32 SCREW
4	IN-18856 (100/box)	1	SOCKET CAP SCREW 12.9 #6-32 X 1”
5	4377900	1	HEXAGONAL JOINT FOR #6-32 SCREW

KIT FOR BLIND THREADED INSERT #8-32

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	4362600	1	KIT 938S #8-32

KIT COMPOSITION

2 *3* *4* *5*

REF.	PART NUMBER	QTY	DESCRIPTION
2	3756900	1	HEAD FOR #8-32 SCREW
3	4377400	1	ADAPTER FOR #8-32 SCREW
4	IN-03156 (100/box)	1	SOCKET CAP SCREW 12.9 #8-32 x 1”
5	4377500	1	HEXAGONAL JOINT FOR #8-32 SCREW

KIT FOR BLIND THREADED INSERT #10-32

REF.	PART NUMBER	QTY	DESCRIPTION
1	4362700	1	KIT 938S #10-32

KIT COMPOSITION

REF.	PART NUMBER	QTY	DESCRIPTION
2	3757700	1	HEAD FOR #10-32 SCREW
3	3757800	1	ADAPTER FOR #10-32 SCREW
4	IN-17814 (100/box)	1	SOCKET CAP SCREW 12.9 #10-32 x 1”
4	IN-12557 (100/box)	1	SOCKET CAP SCREW 12.9 #10-24 x 1”
5	3472000	1	HEXAGONAL JOINT FOR #10-32 SCREW

KIT FOR BLIND THREADED INSERT 1/4-20

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	4362800	1	KIT 938S 1/4-20

KIT COMPOSITION

2 *3* *4* *5*

REF.	PART NUMBER	QTY	DESCRIPTION
2	4378100	1	HEAD FOR 1/4-20 SCREW
3	4378200	1	RING NUT FOR 1/4-20 SCREW
4	IN-05272 (100/box)	1	SOCKET CAP SCREW 12.9 1/4-20 X 1.25”
4	IN-11519 (100/box)	1	SOCKET CAP SCREW 12.9 1/4-28 X 1.25”
5	3754700	1	HEXAGONAL JOINT FOR 1/4-20 SCREW

KIT FOR BLIND THREADED INSERT M3

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	3758400	1	KIT 938S M3

KIT COMPOSITION

2 *3* *4* *5*

REF.	PART NUMBER	QTY	DESCRIPTION
2	3751100	1	HEAD FOR M3 SCREW
3	3756500	1	ADAPTER FOR M3 SCREW
4	IN-03010 (200/box)	1	SOCKET CAP SCREW M3X25 12.9 UNI5931/DIN912
5	4021500	1	HEXAGONAL JOINT WITH SPRING FOR M3 SCREW

KIT FOR BLIND THREADED INSERT M4

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	3758500	1	KIT 938S M4

KIT COMPOSITION

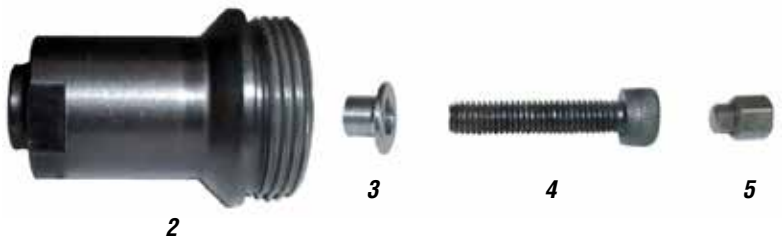
2 *3* *4* *5*

REF.	PART NUMBER	QTY	DESCRIPTION
2	3756900	1	HEAD FOR M4 SCREW
3	3757400	1	ADAPTER FOR M4 SCREW
4	IN-25381 (200/box)	1	SOCKET CAP SCREW M4X25 12.9 UNI5931/DIN912
5	3470600	1	HEXAGONAL JOINT WITH SPRING FOR M4 SCREW

KIT FOR BLIND THREADED INSERT M5

REF.	PART NUMBER	QTY	DESCRIPTION
1	3758600	1	KIT 938S M5

KIT COMPOSITION



REF.	PART NUMBER	QTY	DESCRIPTION
2	3757700	1	HEAD FOR M5 SCREW
3	3757800	1	ADAPTER FOR M5 SCREW
4	IN-21096 (200/box)	1	SOCKET CAP SCREW M5X25 12.9 UNI5931/DIN912
5	3472000	1	HEXAGONAL JOINT FOR M5 SCREW

KIT FOR BLIND THREADED INSERT M6

1

REF.	PART NUMBER	QTY	DESCRIPTION
1	3758700	1	KIT 938S M6

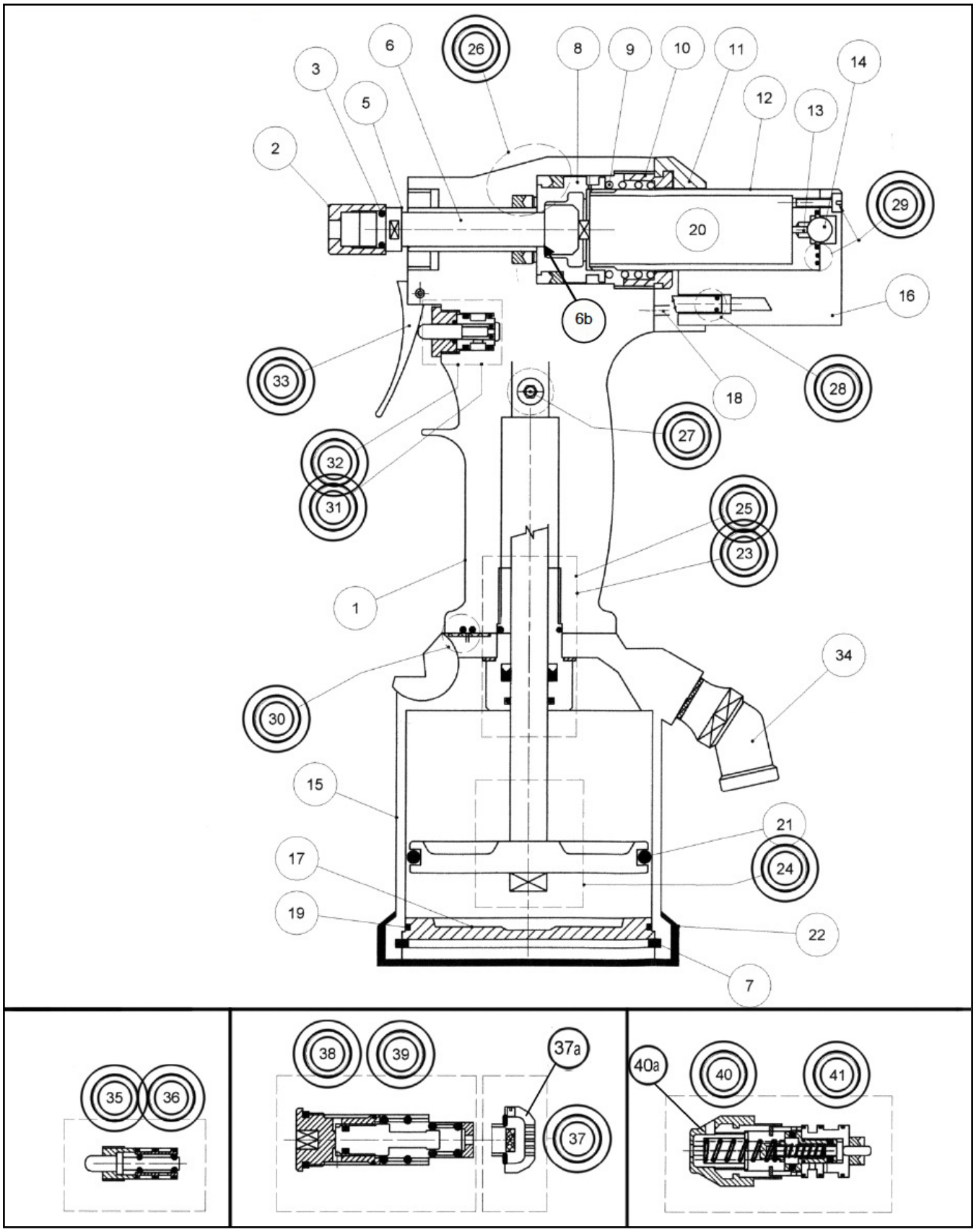
KIT COMPOSITION

2 *3* *4*

REF.	PART NUMBER	QTY	DESCRIPTION
2	3758100	1	HEAD FOR M6 SCREW
3	IN-22121 (200/box)	1	SOCKET CAP SCREW M6X30 12.9 UNI5931/DIN912
4	3472500	1	HEXAGONAL JOINT FOR M6 SCREW

Any modifications and/or additional accessories must be explicitly approved and manufactured by Rivit.

SPARE PARTS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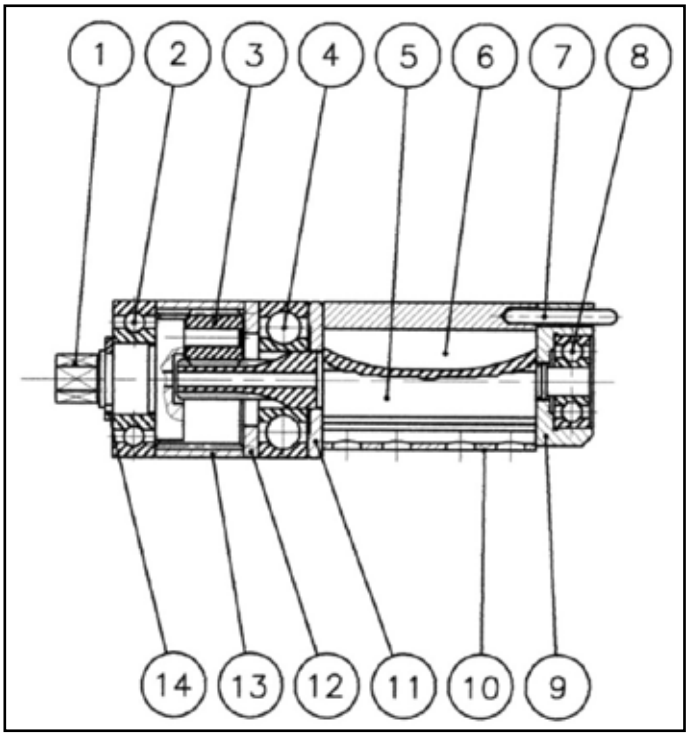
REF.	PART NUMBER	QTY	DESCRIPTION	REF.	PART NUMBER	QTY	DESCRIPTION
1	4153100	1	Handle casing	22	4165100	1	Rubber base
2	3759000	1	Screw blocking ring nut	23	4177400	1	Gasket kit (3 pieces)
3	3068400	1	O-ring	24	4152500	1	Piston, stem, O-ring kit (4 pieces)
5	3757300	1	Adapter	25	4157300	1	Complete stem guide kit (5 pieces)
6	4323200	1	Rotating pin	26	4151000	1	Piston gasket kit (2 pieces)
6b	4373700	1	Skimmer washer	27	4175700	1	Oil cap kit with washer
7	3093200	1	Snap ring	28	4175600	1	Air hoses kit with O-ring (6 pieces)
8	4311600	1	Oil piston	29	4151100	1	O-ring kit and screws (5 pieces)
9	4151700	1	Spring	30	4152300	1	Flat gasket kit and O-ring
10	4151800	1	Ring nut	31	4151200	1	O-ring kit (4 pieces)
11	4151900	1	Protection	32	4156900	1	Kit complete with O-ring (7 pieces)
12	3761500	1	Motor casing	33	4153400	1	Lever - pin kit
13	3761300	1	Rod	34	3235500	1	Air Connection thread 1/4" plus 1/4" gas plus aluminum washer
14	3096900	1	Ball	35	4157000	1	Kit complete with O-ring (8 pieces)
15	4152800	1	Air body	36	4156600	1	O-ring kit (5 pieces)
16	4152000	1	Dispenser	37	4291600	1	Raffle kit (4 pieces)
17	3762300	1	Bottom	38	4155800	1	O-ring kit (7 pieces)
18	4152100	1	Pin	39	4157100	1	Kit complete with O-ring (13 pieces)
19	3762200	1	O-ring	40	4154400	1	Gasket kit (7 pieces)
20	3761000	1	Motor unit	41	4157200	1	Kit complete (18 pieces)
21	3235600	1	O-ring				

Available on special order:

- Deflector ref. 37a (part number 4412900) belonging to KIT ref. 37 (part number 4291600).
- Manostat protection ref. 40a (part number 4412100) belonging to KIT ref. 40 (part number 4154400).

MOTOR UNIT SPARE PARTS (KIT 20)

Part number 3761000.



REF.	PART NUMBER	QTY	DESCRIPTION	REF.	PART NUMBER	QTY	DESCRIPTION
1	3763400	1	Planet wheel holder	8	3327300	1	Bearing
2	3763300	1	Bearing	9	3327400	1	Rear plate
3	3763200	1	Planet wheel	10	3327000	1	Stator
4	3327500	1	Bearing	1	3326900	1	Front plate
5	3523400	1	Rotor	12	3763700	1	Spacer
6	3327100	1	Fin	13	3763600	1	Crown wheel
7	3327200	1	Roller	14	3763500	1	Snap ring

ORDERING SPARE PARTS

Only local authorized dealers are allowed to repair the tool. Otherwise, contact the ATLAS® Technical Assistance Department of PennEngineering, where qualified engineers can help to solve any problems.

GENERAL WARNINGS

The operator must read carefully the information given in the present manual, especially with regard to the safety precautions listed in this chapter. The operator must also observe the warnings listed below:

- The tool shall be used exclusively by trained personnel.
- The tool and the work area shall be kept clean and tidy.
- The tool shall be rested upright on the rubber base on a flat surface to prevent it from falling.
- The tool shall only be used in normal operating conditions.
- The user shall wear suitable clothing taking care to avoid entanglement of loose parts, ties, long hair, cleaning rags etc. in the tool itself.
- When using the tool, the operator and others nearby should wear safety glasses to protect against fastener ejection. We also recommend wearing gloves when using the tool.
- The user shall use the accessories supplied when servicing and/or adjusting the tool.
- The plates applied on the tool by Rivit S.r.l. shall not be removed or altered.
- Unauthorized personnel shall not be allowed to touch the tool.
- Make sure that the air supply hoses are correctly sized.
- Do not drag the tool holding it by the hose when it is connected to the power supply. Keep the hose away from sources of heat and from sharp objects.
- Remember to remove service or adjustment keys after having making a repair and/or adjustment.
- Before disconnecting the compressed air hose from the tool, ensure it is not pressurized.
- Disconnect the air supply before cleaning or making tool repairs.
- Air supply must be disconnected before making tool repairs and cleaning.
- When filling with oil, only use fluids with the characteristics indicated herein.
- If you should accidentally spill oil on your skin, rinse and wash thoroughly with soap and water.
- Where possible, you are recommended to use a safety balance to support the tool.
- Pay attention to possible risk of whiplash with the air supply hoses.
- Do not operate the tool when it is directed towards anyone.

INTENDED USE

The tool is designed exclusively to be used with female threaded type inserts thread sizes #4-40 to 1/4” / M3 to M6.

UNINTENDED USE

The tool shall not be used:

- In explosive or aggressive atmosphere or when there is an excessive amount of dust or oil in the air.
- In atmosphere subject to the risk of fire.
- When it is exposed to weather conditions.

RESIDUE RISK

During the normal working cycle and when servicing the tool, the operators are exposed to some residue risks which, due to the nature of the operations to be carried out, cannot be totally eliminated.
It is therefore absolutely crucial not to exceed the maximum pressure indicated in the technical data section on page 6.

TOOL IDENTIFICATION/SERIAL NUMBER

Model and serial number etched into the outer casing.

Adhesive label indicating the tool model, the name of the manufacturer and the EC marking.

HANDLING

The tool can be hand carried. It is recommended to store the tool in its case after using it.
The tool can be transported safely if is has been correctly put away in its case.

Damages to the tool caused during transport and/or handling are not covered by WARRANTY.
Repairs or replacements of damaged parts are at Customer's charge.

STORAGE

If you are not going to use the tool for a long time, you must put it away according to the following suggestions:

- Store the tool indoors.
- Protect the tool from impacts and stresses by keeping it in its case.
- Protect the tool from damp and excessive heat.
- Keep the tool away from corrosive substances.

CONNECTIONS

To avoid all sorts of problems when starting the tool you are recommended to observe the following:

PNEUMATIC

The pneumatic line is connected by a quick-release coupling hose to be attached to the air connection, thread size 1/4", supplied with the tool. The air supply hose must be flexible and must meet the safety requirements of the tool.

AIR SUPPLY

The air supply line must be free from dirt and damp to prevent the early wear of the moving components of the tool. Therefore, it is recommended to use dry air: i.e. not greased.

PRELIMINARY CHECKS

Before putting the tool into service you need to make a few inspections and checks in order to prevent errors or accidents while starting it.

- Check if the tool has been damaged during transportation.
- Check if the compressed air hose is accurately connected to the air supply line.
- Check if the tool turns freely and if the motor runs freely.

OPERATORS

The tool is designed to be used by one operator only.
Tool operators must satisfy the requirements stated hereafter (or they must be informed and trained accordingly).
They must be aware of the manual herein and of all information relevant to safety:

- They must have some general and technical education, to a sufficient level to be able to understand the manual and to interpret the drawings and the diagrams correctly.
- They must be acquainted with the safety rules, and with the industrial-safety and technical instructions.
- They must have an overall knowledge of the line and of the factory in which the tool is installed.
- They must know how to act in case of emergency, where to find the individual protection means and how to use them correctly.

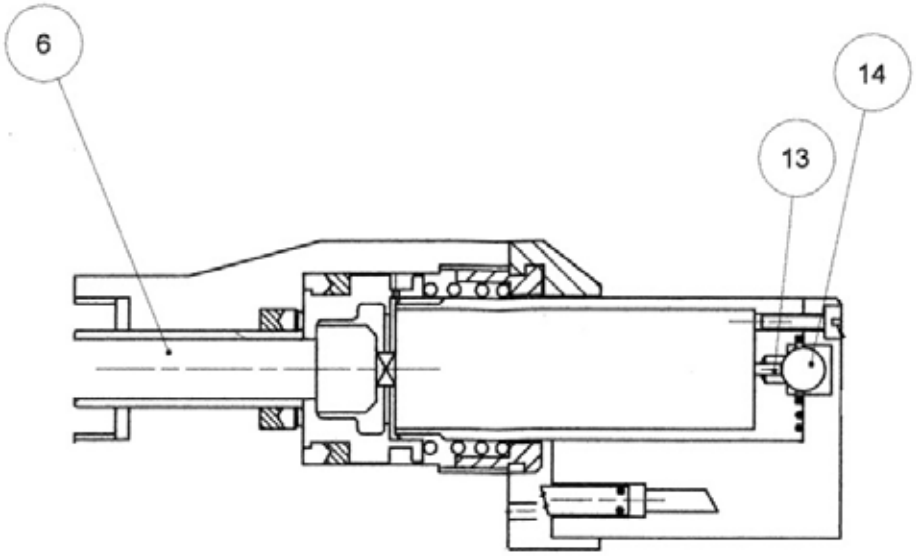
Together with the above-mentioned requirements, the service technicians must also have appropriate technical training.

MOTOR SCREWING ROTATES NONSTOP

When the rotating pin (6 Part Number 4151500) is broken and you replace it, the motor may rotate continuously, which means that the shaft (13 Part Number 3761300) is too long; in this case it will have to be shortened by a few tenths to obtain the closure of the ball (14 Part Number 3096900).

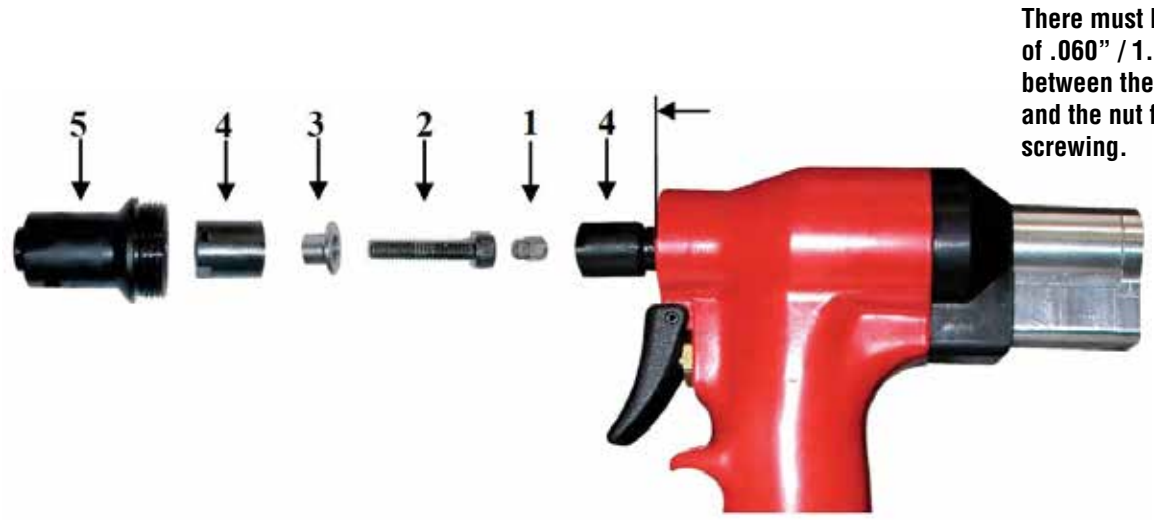
MOTOR UNSCREWING DOES NOT ROTATE

Unlike the situation above, the shaft is too short and it has to be replaced with a new one, fitting it on the rotating pin (you will have to shorten it) in order to obtain the closure of the ball (14 Part Number 3096900).



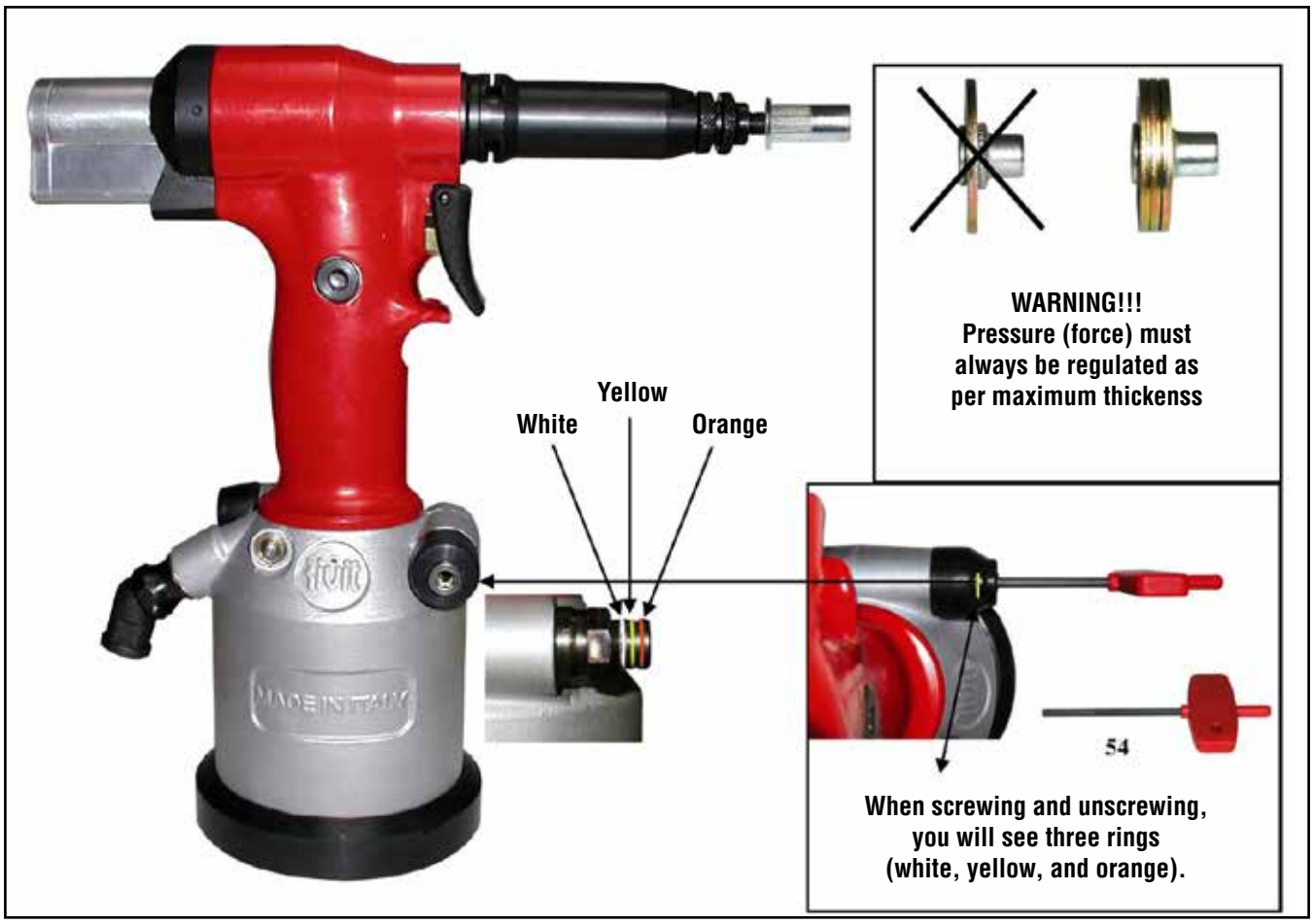
TOOL PREPARATION AND SCREW REPLACEMENT

Warning:
Tool setting and screw replacement must be carried out with the tool disconnected from the air supply line.



There must be a distance of .060" / 1.5mm between the casing and the nut for motor screwing.

To replace screws:
Unscrew the adapter 4 from the tool. Insert joint 1. Insert screw 2. Insert screw adapter 3. Screw on adaptor 4 making sure that the screw (or tie rod) moves freely, and is not stiff. Screw on head 5.



OIL (FORCE) PRESSURE REGULATION SETTINGS

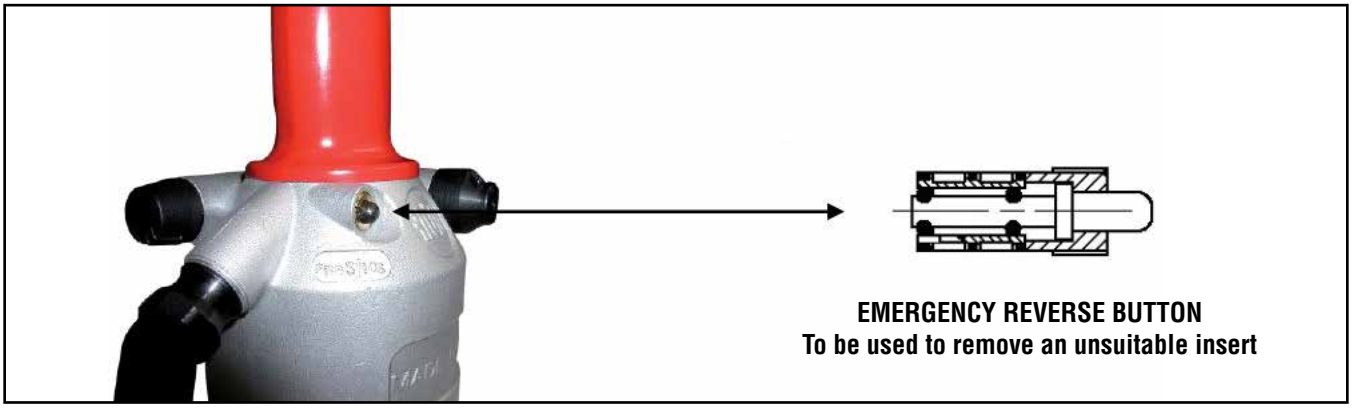
M3 / #4-40 -	White
M4 / #8-32 -	Yellow
M5 / #10-32 -	Yellow
M6 / 1/4-20 -	Orange

NOTE: These settings are general guidelines to the operator. Inserts are not uniform as hardness and therefore some modifications may be necessary (+ or -).

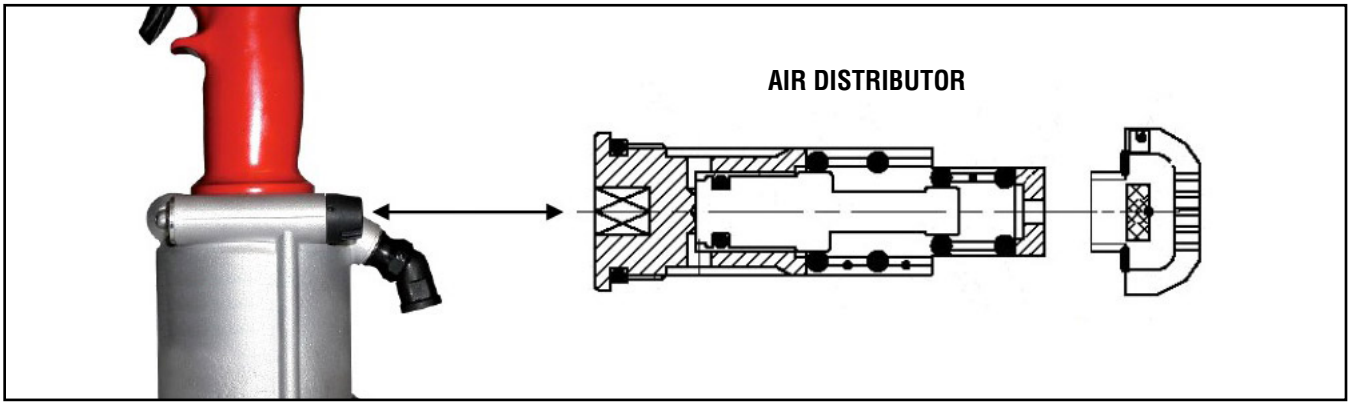
IMPORTANT: OIL PRESSURE ADJUSTMENT - When turing right, screwing force increases. When turning left, force decreases.

WARNING: When the pressure adjustment screw is completely tightened, unscrewing must be done at a pressure of 100 PSI / 6.5 BAR or greater.

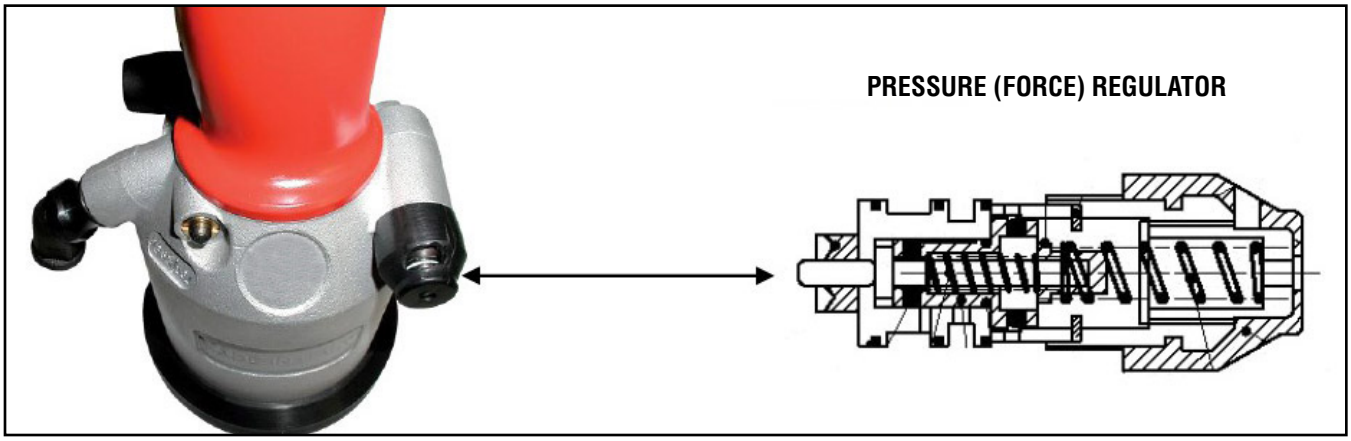
INFORMATION



EMERGENCY REVERSE BUTTON
To be used to remove an unsuitable insert

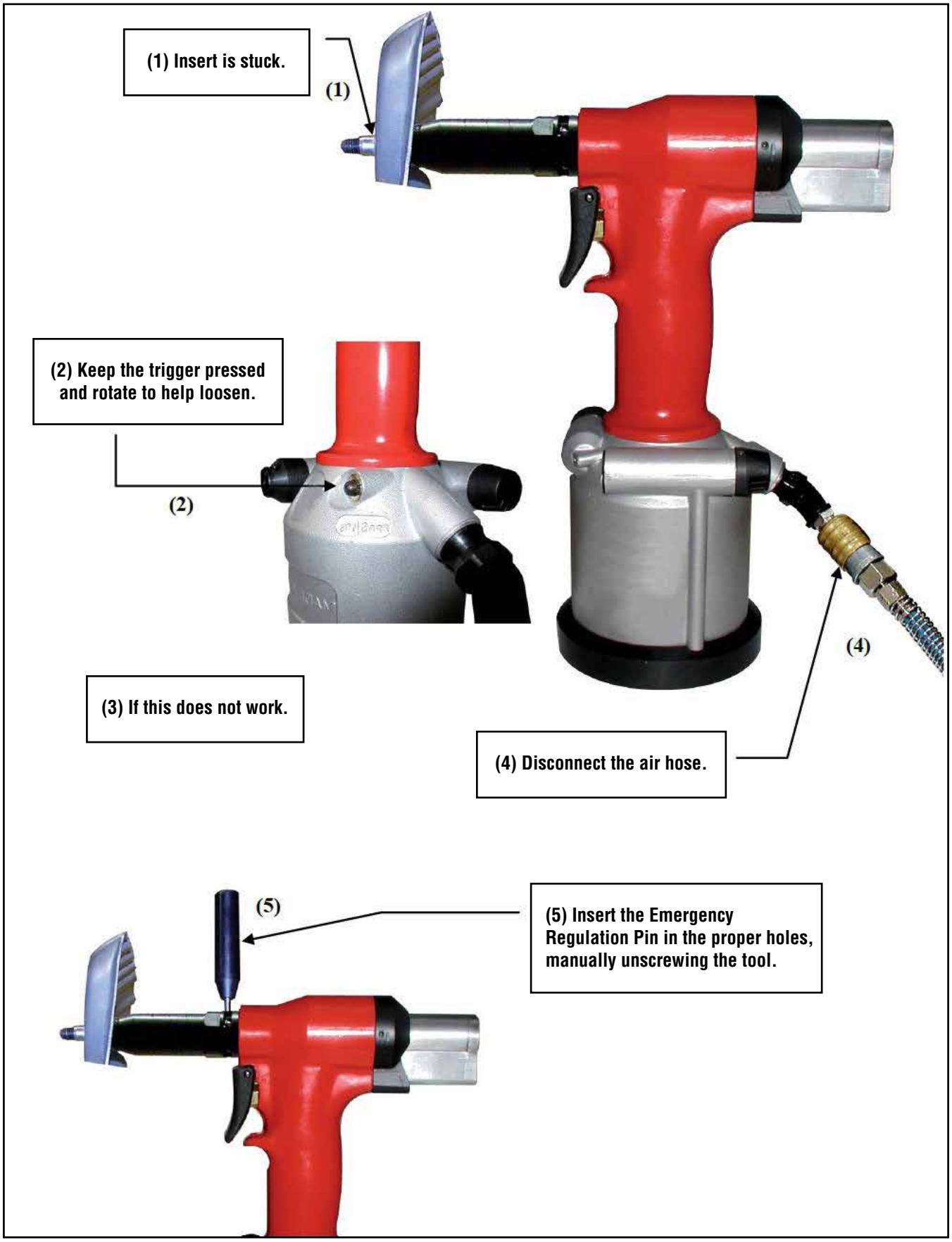


AIR DISTRIBUTOR



PRESSURE (FORCE) REGULATOR

WARNING: The unscrewing cycle may not occur when he rivet nut is not mounted on the screw (tie rod); the manostat isn't under pressure. When the oil is not under pressure, you can not unscrew.


(1) Insert is stuck.
(1)
(2) Keep the trigger pressed and rotate to help loosen.
(2)
(3) If this does not work.
(4)
(4) Disconnect the air hose.
(5)
(5) Insert the Emergency Regulation Pin in the proper holes, manually unscrewing the tool.

MAINTENANCE

Maintenance operations must be carried out with the tool stopped and disconnected from the pneumatic supply line.

Warnings:

- ***The tool maintenance instructions must be followed carefully.***
- ***To ensure safety and perfect tool efficiency, it is recommended to use exclusively ORIGINAL spare parts.***

CLEANING

It is a good rule to completely clean and grease the tool on a periodic basis (depending on the type and frequency of use). These operations must be carried out at least once a year.

Shut-off all sources of power to the tool.

The operator must wear and use suitable personal protections before starting to clean the tool.

ORDINARY MAINTENANCE

In order to prevent stoppages and faults of the tool, an ordinary maintenance (including inspections, checks and operations) must be scheduled to keep the following under systematic control:

- ***State of lubrication of the tool.***
- ***State of wear of consumable parts.***

REFILLING THE HYDRAULIC CIRCUIT WITH OIL

The hydraulic circuit needs to be refilled with oil after a continuous use, and when you notice a reduction in the tool stroke.

Proceed as follows (see photo at right):

- Disconnect the airline from the tool inlet.
- Unscrew the manostat (A) with a wrench.
- Remove cap together with relevant washer 27.
- Put the tool in horizontal position and slowly pour in the hydraulic oil (ISO VG 32 type) 50 until the circuit is full.
- Screw cap back on, together with relevant washer 27.
- Connect the tool to compressed air line and start up a couple of idle cycles. Stop pulling the trigger and slowly loosen screw 27; make sure that the circuit is full with oil and that no air bubbles are left inside.

Wear gloves when managing the oil.

Do not throw the old oil outdoors. Hand it over to an authorized waste disposal center.

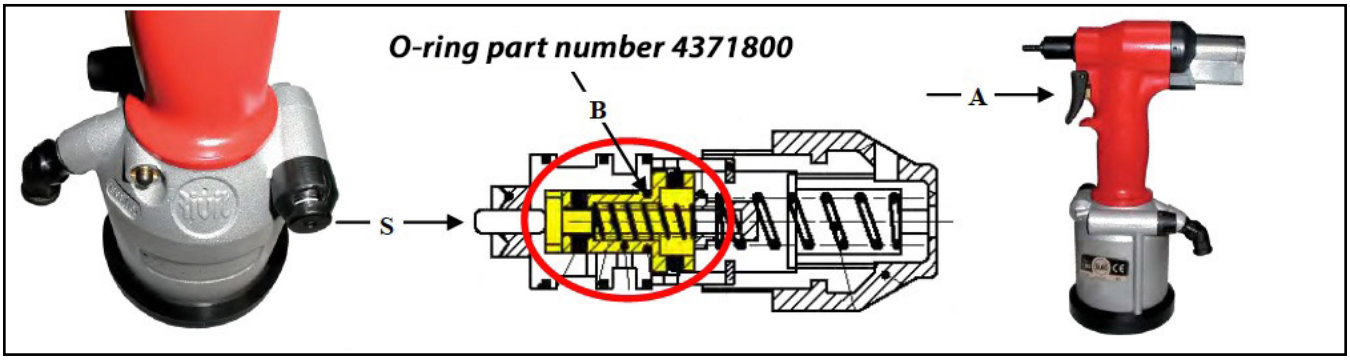
Warning!: If you should accidentally spill oil on your skin, wash and rinse thoroughly with soap and water.

PARTS SUBJECT TO WEAR

On a periodic basis check the rubber base for wear, as this is what ensures the stability of the tool. If it should need replacing, order the spare base from PennEngineering indicating the year/serial number of the tool.

On a periodic basis check the screws and heads for wear and, if necessary, replace them as indicated (page 20).

FAULT DIAGNOSIS



PROBLEM	SOLUTION
No traction	Tool needs oil.
After installing rivet nut, tool does not unscrew properly	Not enough oil in tool. Check O-ring (B) and replace if necessary. O-ring part number 4371800

When you have to work on the pressure switch:
1. Remove air
2. Loosen the oil cap (27) carefully keeping gasket (C) from coming out. If replacing, use guide (1). If after reassembling all parts of the pressure switch and tool does not work properly, O-rings (O1, O2, O3) have not been correctly assembled:
O-ring (O2) when broken unscrews without making traction
O-ring (O3) makes traction but no unscrew
O-ring (O1) can leak air
Consequently, it is advisable to replace all 3 O-rings (ORM 15x1) of the kit (ref. 41) part number 4157200.

REF.	PART NUMBER	DESCRIPTION
1	4380800	Guide bushing to insert Ø 9 lip seal, located at the bottom of the seat of the pressure switch (ref. C)
2	4381200	Ø 9 lip seal (ref. C)
3	—	Ø 8 commercial punches

Items 1 and 2 are special order (please refer to Rivit part numbers).

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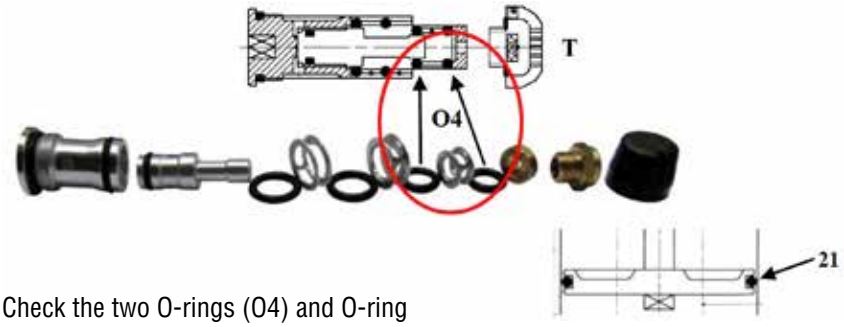
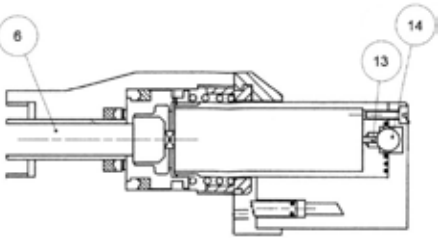
PROBLEM	SOLUTION
Air leaks from muffler	 Check the two O-rings (O4) and O-ring (21 part number 3235600) which could be worn or broken
Motor rotates continuously	When the rotating pin (6 part number 4151500) is broken and you replace it, it may happen that the motor rotates continuously, which means that the shaft (13 part number 3761300) is too long; in this case, it will have to be shortened by a few tenths to obtain the closure of the ball (14 part number 3096900). Unlike the situation above, the shaft is too short and it has to be replaced with a new one, fitting it without end float, witht he air on, in order to obtain the closure of the ball (14 part number 3096900). 
Quick kit assembly	When assembling the quick kit (part number 4176900), with air off, make sure to create an axial space of 1.5mm allowing the pin to move freely.
Loss of revolutions during unscrewing	When you overwork the tool, there may be a loss of revolutions during unscrewing; it is necessary to remove the air hose and add a few drops of oil in the air hose connection and push button (P) for a couple of minutes.

FAULT DIAGNOSIS AND REPAIRS

REPAIRS

To ensure the operational efficiency and safety of the tool, all repair jobs shall be carried out exclusively by the local authorized dealer or by the Technical Assistance Service of PennEngineering.

REQUESTING ASSISTANCE

For any information concerning Use, Maintenance, Installation, Repair etc., PennEngineering is at the Customer's full disposal for all enquiries.
When making inquiries, the customer is requested to be absolutely clear and to always refer to this Manual.

DISMANTLING INSTRUCTIONS

DISMANTLING INSTRUCTIONS

When disposing the tool you need to separate the plastic parts, which are to be disposed of in compliance with current Regulations.
As for the bulk metal part of the tool, simply split-up the steel parts from those in other metals or alloys and send to be melted down and recycled.
The oil drained from the tool must not be thrown outdoors but handed over to an authorized oil disposal center.

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